The August 2015 GeoGirls program was a project designed to inspire girls to gain an appreciation and enthusiasm for Earth sciences using Mount St. Helens as an outdoor volcanic laboratory. Occupations in the field of science and engineering tend to be held by more males than females. One way to address this is to introduce girls to possible opportunities within the geosciences and encourage them to learn more about the dynamic environment in which they live. In 2015, the GeoGirls program sought to accomplish this goal through organizing a five day-long field camp for twenty middle school-aged girls, along with four high school-aged mentors and two local teachers. This group explored Mount St. Helens guided by female scientists from the USGS Cascade Volcano Observatory (CVO), the Mount St. Helens Institute (MSHI), UNAVCO, Boise State, Georgia Tech, University of Washington and Oregon State University. To introduce participants to techniques used by volcanologists, the girls participated in hands-on experiments and research projects focusing on seismology, GPS, terrestrial lidar, photogrammetry, water, and tephra. Participants also learned to collect samples, analyze data, and use microscopes. Through this experience, participants learned strategies for conducting research by developing hypotheses, making observations, thinking critically, and sharing their findings with others. The success of the GeoGirls program was evaluated by participant and parent survey questionnaires, which allowed assessment of overall enthusiasm and interest in pursuing careers in the geosciences. The program was free to participants and was run jointly by MSHI and CVO and funded by NSF, the American Association of University Women, the Association for Women Geoscientists, the Association of Environmental & Engineering Geologists, and private donors. The program will run again in the summer of 2016.